

**AMENDMENTS TO THE CLAIMS:**

This listing of the claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1-17 (cancelled)

18. (previously presented) A synthesizer comprising:

- a. a reaction support comprising three or more reaction chambers; and
- b. a plurality of reagent dispensers comprising at least one reagent dispenser for each reaction chamber, said reagent dispensers configured to simultaneously form closed fluidic connections with each of said reaction chambers, wherein each of said reagent dispensers comprises connections to a plurality of reagent delivery lines such that each reagent dispenser is configured to deliver all reagents necessary for a polymer synthesis reaction.

19. (original) The synthesizer of Claim 18, wherein said reaction support comprises 50 or more reaction chambers.

20. (original) The synthesizer of Claim 18, wherein said reaction support comprises 96 or more reaction chambers.

21. (original) The synthesizer of Claim 18, wherein said reaction chambers comprise synthesis columns.

22. (original) The synthesizer of Claim 21, wherein said synthesis columns comprise nucleic acid synthesis columns.

23. (previously presented) The synthesizer of Claim 18, wherein said reagent dispensers are fluidically connected by said reagent supply lines to a plurality of reagent tanks.

24. (cancelled)

25. (original) The synthesizer of Claim 23, wherein said plurality of reagent tanks comprise one or more tanks selected from the group consisting of acetonitrile tanks, phosphoramidite tanks, argon gas tanks, oxidizer tanks, tetrazole tanks, and capping solution tanks.

26. (original) The synthesizer of Claim 23, wherein said reaction support comprises a fixed reaction support.

27. (original) The synthesizer of Claim 23, wherein said reaction support further comprises a plurality of waste channels, said waste channels in closed fluidic contact with each of said reaction chambers.

28. (original) The synthesizer of Claim 27, further comprising a detection component, wherein said detection component detects detritylation.

29. (original) The synthesizer of Claim 28, wherein said detection component comprises a CCD camera.

30. (original) The synthesizer of Claim 28, wherein said detection component comprises a spectrophotometer.

31. (original) The synthesizer of Claim 28, wherein said detection component comprises a conductivity meter.

32. (original) The synthesizer of Claim 18, further comprising a heating component.

33. (original) The synthesizer of Claim 18, further comprising a mixing component.

34-48 (cancelled)

49. (previously presented) The synthesizer of Claim 18, further comprising a fail-safe reagent delivery system for delivery of one or more reagents to said reagent dispensers, wherein said reagent dispensers are fluidically connected by said reagent supply lines to said fail safe delivery system.

50-56 (cancelled)

57. (original) The synthesizer of Claim 18 further comprising a heating component providing substantially uniform heat to at least two of said three or more reaction chambers.

58. (original) The synthesizer of Claim 57, wherein said heating component comprises delivery of heated reagents to said at least two of said three or more reaction chambers.

59-63 (cancelled)

64. (original) The synthesizer of Claim 57, wherein said heating component provides an optimized reaction temperature for a coupling step, said optimized reaction temperature being in the range of about 20 degrees C to about 60 degrees C.

65-68 (cancelled)

69. (previously presented) The synthesizer of Claim 18, further comprising a mixing component.

70-73 (cancelled)

74. (previously presented) The synthesizer of Claim 69, wherein said mixing component is selected from the group consisting of an ultrasonic mixer, a magnetic mixer, a fluid oscillator, and a vibrational mixer.

75-96 (cancelled)